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# SCIENCE

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## THE CHEMICAL WORK OF THE U. S. GEOLOGICAL SURVEY\*

THE present Geological Survey of the United States was organized in 1879. In 1880 a chemical laboratory was established at Denver, Colo., in charge of Dr. W. F. Hillebrand, with whom were associated Mr. Antony Guyard and, later, Mr. L. G. Eakins. In 1882 Dr. W. H. Melville opened a second laboratory at San Francisco, and in the autumn of 1883 the central laboratory at Washington began operations with myself as chief chemist. In November, 1885, Dr. Hillebrand was transferred to Washington; early in 1888 he was followed by Mr. Eakins, and the Denver laboratory was discontinued. In the spring of 1890 Dr. Melville also removed to Washington, and the chemical work of the survey was concentrated at headquarters. In recent years a number of other laboratories have been established for special purposes, and the work done in them will be considered in due order later.

The primary purpose for which the chemists of the survey were employed was to assist the geologists in working up their collections. Analyses were needed for the identification of mineral substances, and they were called for in great numbers. Up to January 1, 1909, more than 6,000 analyses have been recorded upon the books of the central laboratory; covering rocks, minerals, ores, coals, waters, sediments, saline incrustations, etc., and their conduct has necessarily occupied a large share of the time of the chemists.<sup>1</sup> But the field of

\* Prepared for the International Congress of Applied Chemistry in London. Published by permission of the Director of the Survey.

<sup>1</sup> Some hundreds of other analyses were made in the Denver and San Francisco laboratories.